

USSR

UDC 669.0-154.046.56:536.7

FILIPPOV, S. I., and PADERIN, S. N., Moscow Institute of Steel and Alloys

**"Theoretical Foundations of Deep Carbon Oxidation in Metallic Melts"**

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya,  
No 8, Aug 73, pp 15-20

**Abstract:** The possibilities of refining a melt of complex composition and determining the physical and chemical principles of deep oxidation of impurities in the oxidizing period of melting were investigated. The thermodynamic equations for calculation of the minimum amount of carbon for a maximum amount of oxygen in relation to temperature are given. These equations indicate how to achieve maximum decarburization of heats. Melting tests were conducted in five-ton arc furnaces from which it was possible to quantitatively evaluate the kinetic characteristics and to reveal the optimum conditions of the oxidation period during melting with the purpose of developing new smelting technology, especially for low-carbon alloyed steel in open arc furnaces. Three figures, ten bibliographic references.

1/1

USSR

UDC 669.183.046.58:669.295

DEDUSHEV, L. A., and FILIPPOV, S. I., Moscow Institute of Steel and Alloys, "Elektrostal'" Plant

"The Distribution of Titanium Between Metal and  $\text{CaO-MgO-TiO}_2\text{-Al}_2\text{O}_3\text{-CaF}_2$  Slag"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 7, 1972, pp 19-23

Abstract: A study was made of the distribution of titanium between a  $\text{CaO-MgO-TiO}_2\text{-Al}_2\text{O}_3\text{-CaF}_2$  slag melt and an Fe-Cr-Ni alloy containing 3.12%Ti. The titanium distribution coefficient between slag and metal is determined by the concentration of Ca, Mg, and Ti oxides in the slag. This makes it possible to consider the investigated slag system as a pseudoternary system in which  $\text{CaF}_2$  and  $\text{Al}_2\text{O}_3$  appear as diluents. From the position of the behavior of the slag system as a pseudo-ternary system, calculation formulas are developed on the basis of experimental data. Results of calculations by the suggested formulas agree with experimental data. Three figures, one table, twelve formulas, thirteen bibliographic references.

1/1

USSR

UDC 669.046.5

YAKOVLEV, S. I., FILIPCOV, S. I.

"Temperature and Oxygen Potentials Distribution in an Oxidizing Gas Flow Interacting With Metal Melt"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISI) (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys). Izd-vo "Metallurgiya," No 61, 1970, pp 62-65

Translation of Abstract: Problems of temperature characteristics and compositions of the oxidizing gas flow in oxygen blowing over the surface of ferro-carbon melts are investigated. 3 figures, 2 references.

1/1

USSR

UDC 669.180

ARSENT'YEV, P. P., FILIPPOV, S. I.

"Viscosity and Overcooling Phenomenon in Iron Melts"

Moscow, V sb. Sovremennyye problemy kachestva stali" (MISI) (Collection of Works. Modern Problems of Steel Quality)(Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 58-62

Translation of Abstract: Problems of viscous properties of liquid pure iron and iron melts with various impurities and also the nature of the overcooling phenomenon of molten iron are considered. Regularities of the effect of separate additions on the viscous properties of iron melts are clarified. An evaluation of their structural characteristics is presented. 2 figures, 22 references.

1/1

- 46 -

Steels

USSR

UDC 669.15-194.26'24.046.56

FILIPPOV, S. I., and RIMKEVICH, V. S.

"Effect of the Components of a Chromium-Nickel Melt on the Kinetics of Complete Decarburization"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 1, 1971, pp 18-22

Abstract: The process of carbon oxidation in the presence of chromium and nickel plays an important part in the technology of melting stainless and heat-resistant steels. This study shows that patterns of critical concentrations determine both the mechanism and kinetics of an alloy melt. The below-critical region of carbon concentrations reveals three stages which can be affected by the alloying element. A change to the film process of indirect carbon oxidation at stages II and III practically eliminates the effect of the different intensities of the parallel oxidation of iron and chromium on the metal's decarburization rate. The inhibiting effect of chromium and the accelerating effect of nickel on the process of decarburization in the  $C < C_{cr}$  region have been revealed. The kinetic patterns of the interrelation between carbon and chromium oxidation processes have

1/2

USSR

FILIPPOV, S. I., and RIMKEVICH, V. S., Izvestiya Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 1, 1971, pp 18-22

been analyzed. The possibility is shown of accelerating the process of decarburization by feeding the oxidizing agent at lower rates and by involving hydrodynamic factors. Figures in the original article show the dependence of the decarburization rate on carbon content, the dependence of long [C] on time at various feeding rates of the oxidizer, the dependence of  $C_{Cr}$  and  $C_{II}$  on both carbon content and oxidizer feeding rates, and kinetic curves of carbon and chromium oxidation versus oxygen consumption (ml/min).

2/2

- 61 -

1/2 015 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--ELECTRICAL CONDUCTIVITY OF IRON AND IRON CARBON MELTS -U-  
AUTHOR--(03)-ARSENTYEV, P.P., FILIPPOV, S.I., LISITSKIY, B.S.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(3), 18-22  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--MATERIALS  
TOPIC TAGS--ELECTRIC CONDUCTIVITY MEASUREMENT, ALLOY MELTING, IRON ALLOY,  
LIQUID METAL PROPERTY, CARBON, ALLOY COMPOSITION  
  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3005/0838 STEP NO--UR/0148/70/013/003/0018/0022  
CIRC ACCESSION NO--AT0132928

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132928

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN APP. IS DESCRIBED FOR THE DETN. OF ELEC. COND. OF MELTED FE AND FE ALLOYS. THE ELEC. CONDS. OF FE (C 0.23, SI 0.005, MN TRACES, S 0.012, P 0.005, AND O 0.015 WT. PERCENT) WERE DONE IN THE RANGE 1400 TO 1600-50DEGREES (SOLID FE). DURING THE MELTING OF FE THERE OCCURRED A SMALL INCREASE OF ELEC. COND.; THE RATIO OF ELEC. RESISTANCE FOR FE SUBLIQ. TO THAT OF FE SUBSOLID EQUALS 1.060. THIS INDICATES THAT THE ELECTRON STRUCTURE IN MOLTEN FE IS ABOUT THE SAME AS IN SOLID FE. THE SP. RESISTANCE OF MOLTEN FE AT THE M.P. WAS 135.1 MICROHM-CM. THE TEMP. DEPENDENCE WAS DESCRIBED BY AN EQUATION. FOR THE SOLID FE A SIMILAR EQUATION WAS DEVELOPED. THE ELEC. RESISTANCE OF FE-C ALLOY WAS DETD. IT IS ASSUMED THAT FE-C ALLOYS CONSIST IN 2 DIFFERENT STATES. THE FAIRLY HIGH INCREASE OF ELEC. RESISTANCE WITHIN THE RANGE 0.2-0.4PERCENT INDICATES THAT C IS PRESENT AT A CATION, WHILE GREATER THAN 0.4PERCENT C THE FE-C SOLID SOLN. EXISTS WITH A DIFFERENT STRUCTURE OF SHORT ORDER, SIMILAR TO GAMMA SOLN. FACILITY: MOSK. INST. STALI SPLAVOV, MOSCOW, USSR.

UNCLASSIFIED



1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--PRECRYSTALLIZATION ANOMALIES OF THE SPEED OF SOUND IN MELTS OF  
METALS AND INTERMETALLIC A PRIMEII B PRIMEV TYPE COMPOUNDS -U-  
AUTHOR-(02)-YATSYK, S.I., FILIPPOV, S.I.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(1), 121-3  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS  
TOPIC TAGS--METAL RECRYSTALLIZATION, INTERMETALLIC COMPOUND, ACOUSTIC  
PROPERTY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1986/1010 STEP NO--UR/0149/70/013/001/0121/0123  
CIRC ACCESSION NO--AT0102944  
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AT0102944

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRECRYSTN. PHENOMENA WHICH ANTICIPATE THE APPEARANCE OF THE SOLID PHASE WERE STUDIED BY DETD. THE PROPAGATION RATE FOR LONGITUDINAL ACOUSTICAL VIBRATIONS IN METALS (ZN, CD) AND SEMIMETALS (SB) AND INTERMETALLIC COMPOS. OF THE A PRIMEII B PRIMEV TYPE (ZN SUB3 SB SUB2, CDSB) BY USING THE METHOD DESCRIBED EARLIER (Y., 1968). FOR THE METALS, THERE IS A LINEAR DECREASE IN THE RATE WITH INCREASING TEMP. WHICH IS ATTRIBUTED TO AN INCREASE IN THE AV. INTERAT. DISTANCES AND THE DESTRUCTION OF LOCAL STRUCTURE. IN SB THE RATE INCREASES WITH TEMP. REACHING A MAX. AT 830DEGREES AND THEN DECREASES ALMOST LINEARLY. THIS IS EXPLAINED BY THE PRESENCE OF 2 STRUCTURES IN THE MELT: A REGION OF SPHERICAL DENSE PACKING OF THE SB PRIMES POSITIVE IONS AND A REGION OF LAMINAR PACKING. THE INCREASE IN THE RATE WITH TEMP. IS ATTRIBUTED TO THE PARTIAL DESTRUCTION OF THE COVALENT, NONMETALLIC STRUCTURE, THE MAX. CORRESPONDING TO THE COMPLETE DESTRUCTION AND THE FORMATION OF SYM. PACKING OF THE IONS. FOR THE COMPOS. THERE IS A CHARACTERISTIC, EXPONENTIAL INCREASE IN THE RATE OVER A LARGE TEMP. RANGE ABOVE THE M.P. THE CHANGE IN THE ACOUSTICAL PROPERTIES IS CALCD. ON THE BASIS OF THE STRUCTURE OF THE ELECTRON ENERGY ZONES IN THE MELT.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--INTERACTION OF LIQUID OXIDE PHASES WITH A CARBON MELT -U-  
AUTHOR--(03)-MAZHENOV, M.A., RYZHONIKOV, D.I., FILIPPOV, S.I.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(1) 13-17  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS  
TOPIC TAGS--MOLTEN METAL, IRON OXIDE, CARBON, SLAG  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1988/0949 STEP NO--UR/0148/70/013/001/0013/0017  
CIRC ACCESSION NO--AT0105818  
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--19SEP70

CIRC ACCESSION NO--ATO105818

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ROTARY CRUCIBLE METHOD WAS USED TO DET. THE INTERACTION OF MOLTEN OXIDE PHASES WITH FeO AT HIGH TEMPS. THE ROTATION VELOCITY OF THE CRUCIBLE WAS 380-570 RPM. THE PRESSURE CHANGES IN THE SYSTEM DURING THE INTERACTION OF A C MELT WITH THE SLAG CHARGE CONTG. 55.5-83.5PERCENT FeO ARE GIVEN, AS WELL AS THE EFFECTS OF TEMP. AND OF THE ROTATION OF THE CRUCIBLE.

UNCLASSIFIED

USSR

UDC 628.165.04:628.31

TKACH, V. I., FILIPPOV, S. N., and SOROKIN, V. S.

"Distillation Desalination Units for Purification of Sewage From Some Industries"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 7, 1973, pp 17-21

Abstract: The problems involved in purification of sewage with high salt content are discussed including the aspects of their dumping into the general water works, recycling, etc. Purification units have been designed based on evaporation of sewage. Technical diagrams for the apparatus used in thermal purification are reported. None of them are in use as yet. Some are being built at present time, some are still on the drawing boards.

1/1

USSR

UDC 542.48

KOLOTYGIN, Yu. A., D'YAKOV, A. A., FILIPPOV, S. N., and POLYAK, T. I.,  
Sverdlovsk

"Acid Treatment of Distilled Sea Water"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 10, 1972, pp 5-6

Abstract: Experimental results are reported on the study of thermal decomposition of bicarbonates in partially acidified Caspian Sea water. It was shown that the decomposition of bicarbonates can be almost completely prevented by acidifying the water to pH 5-6. On this basis a method was developed for evaporation of sea water following a partial acidification of the starting material.

1/1

- 68 -

USSR.

UDC 533.95:538.4

3

SAMARSKIY, A. A., Corresponding Member of the Academy of Sciences USSR, KURDYUMOV, S. SP., KULIKOV, YU. N., LESKOV, L. V., POPOV, YU. P., SAVICHEV, V. V., and FILIPPOV, S. S., Institute of Applied Mathematics, Academy of Sciences USSR, Moscow

"Magnetohydrodynamic Model of Unsteady Plasma Acceleration"

Moscow, Doklady Akademii Nauk SSSR, Vol 206, No 2, 1972, pp 307-310

**Abstract:** During an experimental study of pulsed plasma accelerators, some physical phenomena were discovered which cannot be explained within the framework of existing simplified models: viz., the existence of a laminated structure for the ejected plasma formation, motion counter to the accelerating ampere force, the presence of high-multiplicity ions in the plasma, heating up of the plasma to high temperatures in narrow sections, etc. Therefore, the authors undertook to calculate the dynamics of plasma formations in pulsed accelerators, with allowance for the spatial distribution of the physical characteristics of the plasma, radiation, and nonlinear effects in the plasma. As a result of computer-aided calculations: density, velocity, temperature,

1/2

USSR

3

SAMARSKIY, A. A., et al., Doklady Akademii Nauk SSSR, Vol 206, No 2, 1972, pp 307-310

current, and the magnetic field along the direction of motion were determined. It is shown that there are nonlinear mechanisms leading to the appearance of heated current layers (T-layers) in the medium, separated by intervals of relatively cold gas. The T-layers evolve and generate shock waves which propagate on both sides, and this leads in turn to the production of new T-layers, the formation of plasma clusters and their interaction, the return motion of the substance, and the appearance of closed current loops in the plasma. A study is made of the energy balance in the accelerator and the time redistribution of individual forms of energy.

2/2



USSR

UDC 533.9:538.561

YEROFEYEV, V. S., SANOCHKIN, YU. V., and FILIPPOV, S. S.

"Electrical Layer Near the Anode in a Discharge With Transverse Magnetic Field"

Minsk, Kolebaniya i Volny v Plazme. (Oscillations and Waves in a Plasma),  
"Nauka i Tekhnika," 1971, pp 49-52

**Abstract:** The authors examine the problem of the distribution of potential and concentration of charged and neutral particles in the electric field near the anode forming in a discharge with a strong transverse magnetic field. They investigate the case of an independent discharge by allowing for the intake and burn-up of the neutral gas. The question concerning the probability of ionization of the neutral atoms in the layer is discussed, and solutions are also found for other charge conditions. The authors use equations to prove their solution and illustrate their findings graphically on two figures. Figure 1 shows the potential distribution and Figure 2 shows the characteristics of the neutral atoms. The article contains 2 illustrations and 5 bibliographic entries.

1/1

USSR

UDC: 531.1

KLIMOV, D.M., ROGACHEVA, L.N. and FILIPPOV, V.A., Moscow

"Resonant Regimes of Gimbal - Mounted Gyroscope"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Tverdogo Tela, No 4,  
Jul/Aug 72, pp 3-14

Abstract: The motion of a balanced gyroscope, gimbal mounted on a fixed base, is analyzed. The equations of motion are set up. The solutions are obtained for the case of no excitation and for the case of a small cyclic moment acting on the inner ring. It is shown that with no excitation the inner ring may oscillate or rotate depending on the initial conditions. The amplitudes of oscillation and the speed of rotation as a function of exciting frequency are given. The stability of resonant regimes, including the case of zero friction of the gimbals, is investigated. Graphs of resonant frequency for several values of friction coefficient are presented.

1/1

Reliability Theory

USSR

UDC 621.396.69.019.3

ABRAMOV, V. A., PRUDNIKOV, I. V., PIIIPPOV, V. A.

"Predicting the Reliability of Electronic Equipment"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1970, vyp. 5, pp 165-173 (from RZh-Radiotekhnika, No 7, Jul 71, Abstract No 7V329)

Translation: The paper deals with the prediction of reliability of quartz resonators with regard to gradual and sudden failures. Sudden failures are distributed according to Poisson law, gradual failures are studied by statistical methods. As a result of the study, a model is developed which enables determination of the reliability of elements whose output characteristics are approximated by a linear law. Resumé.

1/1

Gyroscopic

USSR

KLIMOV, D. M., FILIPPOV, V. A., Moscow

"On Resonance in a Strongly Nonlinear Gyroscopic System"

Moscow, Mekhanika Tverdogo Tela, No 6, Nov/Dec 1970, pp 42-54

Abstract: Forced resonance oscillations are considered for a gyroscope in a Cardan suspension, where the amplitudes of the oscillations are assumed to be finite, thus resulting in appreciable nonlinearity of the system. An approximate formula is derived for the mean angular velocity of the gyroscope about the external axis in the case of small equilibrium amplitudes. The result is analogous to that found in a previous work for the case of undamped nutation, which coincides with formulas derived by Magnus, Plymale and Goodstein.

1/1

USSR

UDC: 621.374(088.8)

FILIPPOV, V. A., KRYUCHKOV, V. V.

"A Device for Synchronizing Pulses"

USSR Author's Certificate No 263670, filed 9 Sep 68, published 8 Jun 70  
(from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A303 P)

Translation: This Author's Certificate introduces a pulse synchronizer which contains switches, delay lines and a flip-flop. As a distinguishing feature of the patent, the possibility of two pulses appearing at the output of the device in the case of time coincidence of the synchronized and cadence pulses is eliminated by connecting the output of the first switch to one of the inputs of the second switch through two series-connected delay lines whose common point is connected to the reset terminal of the flip-flop whose output is connected to the other input of the second switch. E. L.

1/1

1/2 017 UNCLASSIFIED PROCESSING DATE—30OCT70  
TITLE—MOTION OF A CORRECTABLE GYROSCOPE —U—  
AUTHOR—FILIPPOV, V.A.  
COUNTRY OF INFO—USSR  
SOURCE—AKADEMIIA NAUK SSSR, IZVESTIIA, MEKHANIKA TVERDOGO TELA, MAR. APR.  
1970, P. 33-38  
DATE PUBLISHED—70  
  
SUBJECT AREAS—NAVIGATION  
TOPIC TAGS—GYROSCOPE MOTION, GYROSCOPE MOTION EQUATION, MOTION STABILITY  
  
CONTROL MARKING—NO RESTRICTIONS  
DOCUMENT CLASS—UNCLASSIFIED  
PROXY REEL/FRAE—2000/0270 STEP NO—UR/0484/70/000/000/0033/0038  
CIRC ACCESSION NO—AP0124031  
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSIGN NO--AP0124031

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONSIDERATION OF THE STABILITY OF MOTION AND OF THE SMALL VIBRATION FREQUENCY OF A CORRECTABLE GYROSCOPE WHEN THE CORRECTION MOMENT FORMS AN ARBITRARY ANGLE WITH THE MISMATCH PLANE. THE CASE OF SYMMETRICAL AND ASYMMETRICAL GYROSCOPES ARE ANALYZED AND COMPARED. IN PARTICULAR, IN THE CASE OF AN ASYMMETRICAL GYROSCOPE THE EXISTENCE OF FOUR SMALL VIBRATION FREQUENCIES IS SHOWN OF WHICH THREE ARE OF THE ORDER OF THE PROPER ROTATION FREQUENCY.

UNCLASSIFIED

USSR

UDC: 621.318.1

FILIPPOV, V. D.

"Some Peculiarities in the Manufacture of Multiapertured Ferrite Plates"

Elektron. tekhnika. Nauch-tekhn. sb. Mikroelektronika (Electronic Technology. Scientific and Technical Collection. Microelectronics), 1970, vyp. 5(26), pp 49-50 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V404)

Translation: The author outlines the results of mathematical-statistical research on the production and use of multiapertured ferrite plates. Laws of distribution are given for the basic parameters of the coercive force  $H_c$  and residual magnetic induction  $B_r$ . Recommendations are given on cutting down rejects and technological losses. Resumé.

1/1

- 97 -



USSR

UDC: 669.296.5:620.193/.196

FILIPPOV, V. F., KASHCHUK, V. A.

"Influence of the Addition of Transition Metals on the Corrosion Resistance of Zirconium"

Sb. Nauch. Tr. Tomsk. Inzh.-Stroit. In-t [Collected Scientific Works of Tomsk Institute of Construction Engineering], 1973, No 21, pp 68-71 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 81729, by L. Petrova).

Translation: The corrosion properties of Zr were studied with the addition of Ti, V, Cr, Mn, Fe, Co, Ni, W, Re, Y, Nb, Mo, Ru, Rh, Pd, Ta, Os, Ir (from 0.05 to 1.6%) in a 50% solution of  $\text{HNO}_3$  at 35° 48 g on the basis of weight loss. The greatest increase in the resistance of Zr to corrosion resulted from the addition of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir. The addition of Y, V, Nb and Ta increased the corrosion resistance of Zr less, while Ti, Cr, Mn, Mo, W and Re increase it still less. The corrosion resistance of Zr is discussed on the basis of the electron structure of the metal. 1 table, 4 biblio. refs.

1/1

1/3 . 039 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--CHANGE IN THE SPECTRAL COEFFICIENTS OF RADIATION ATTENUATION BY  
HAZE IN THE SPECTRAL REGION 0.59-13 MICRONS -U-  
AUTHOR-(02)-FILIPPOV, V.I., MIRUMYANTS, S.D.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IZVESTIYA AKADEMII NAUK SSSR, FIZIKA ATMOSFERY I OKEANA,  
VOL VI, NO 6, 1970, PP 641-643.  
DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--ATTENUATION, AEROSOL, ATMOSPHERE, TURBIDITY, IR RADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1945

STEP NO--UR/0362770/006/066/0641/0643

CIRC ACCESSION NO--AP0137470

UNCLASSIFIED

2/3 039

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0135470

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE USE OF AN ELECTRONIC COMPUTER AFFORDS EXTENSIVE POSSIBILITIES FOR DIRECT COMPUTATION OF THE SPECTRAL COEFFICIENTS OF AEROSOL ATTENUATION ALPHA (LAMBDA) ON THE BASIS OF THE EXPRESSIONS OF THE MIL THEORY OR CORRESPONDING APPROXIMATE FORMULAS UNDER THE CONDITION OF STIPULATION OF THE MICROPHYSICAL PROPERTIES OF PARTICLES RESPONSIBLE FOR ATMOSPHERIC TURBIDITY. LACK OF RELIABLE DATA ON THE SPECTRUM OF DISTRIBUTION OF AEROSOL PARTICLES BY SIZE IS RELATED TO DIFFICULTIES IN MEASURING THE PARAMETERS OF THE AEROSOL MEASURING 0.07-0.6 MICRON AND NEVERTHELESS PLAYING AN IMPORTANT ROLE IN FORMING THE TYPE OF SPECTRAL DEPENDENCE ALPHA (LAMBDA). ACCORDINGLY, IT IS NECESSARY TO OBTAIN DATA ON THE AEROSOL BY NUMEROUS MEASUREMENTS OF THE OPTICAL PROPERTIES OF ATMOSPHERIC HAZES. ONLY SUCH MEASUREMENTS, INVOLVING REGISTRY OF FORMATION AND VARIABILITY OF AEROSOL STATES WITH CHANGES IN THE SURROUNDING METEOROLOGICAL CONDITIONS CAN GIVE FUNDAMENTAL INFORMATION ON THE PHYSICAL LAWS DETERMINING THE FORMATION OF OPTICAL WEATHER. THIS IS A CONTINUATION OF A PRELIMINARY REPORT BY THE AUTHORS WHICH WAS PUBLISHED ONLY IN ABSTRACT FORM. THE EXAMPLES CONSIDERED IN THIS PAPER CORRELATE WITH THE RESULTS OF EARLIER INVESTIGATIONS INDICATING A DEFINITE ROLE OF THE CONDENSATION PROCESS IN THE FORMATION OF AEROSOL SITUATIONS. THE EXAMPLES SHOW THAT AEROSOLS OBSERVED UNDER NATURAL CONDITIONS CAN DIFFER SUBSTANTIALLY IN THEIR PARTICLE SIZE SPECTRUM, WHICH IS DEPENDENT ON THE CHANGE IN METEOROLOGICAL CONDITIONS AND AS A RESULT, ON THE SEASON OF THE YEAR. IT IS ESSENTIAL TO TAKE INTO ACCOUNT THE LIFETIME OF THE HAZE.

3/3 039

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0135470

ABSTRACT/EXTRACT--DURING RELATIVELY BRIEF SUMMER HAZES THE PARTICLE  
DISTRIBUTION IS SHARPLY LIMITED UPWARD. DURING OTHER SEASONS, WHEN  
THERE IS AN INCREASE IN THE DURATION AND RECURRENCE OF STATES  
CHARACTERIZED BY A METEOROLOGICAL RANGE OF VISIBILITY LESS THAN 20 KM,  
THE LARGE PARTICLE FRACTION PLAYS AN IMPORTANT ROLE IN THE ATTENUATION  
OF INFRARED RADIATION.

UNCLASSIFIED

USSR

UDC: 621.791.753.5.037-52:62-413:669.715

KORNEYEV, A. D., Candidate of Technical Sciences, ZUSIN, V. YA., Engineer,  
FILIPPOV, V. K., Engineer, BAGRYANSKAYA, S. K., Engineer, and MOLCHANOV, A. F.,  
Engineer, Zhdanov Metallurgical Institute

"Automatic Hidden Arc Welding of Thick-Walled Aluminum"

Moscow, Svarochnoye Proizvodstvo, No 6, Jun 73, pp 48-49

Abstract: Aluminum 40mm thick was welded with a hidden arc (under ceramic flux) using the VDM-1601 rectifier as the power source. Two parallel connected VKSM-1000 rectifiers were used for metal thicker than 40mm. The butt joint welding of plates made from A5 aluminum was conducted with two electrode wires, perpendicular to the weld seam axis. A plate made from low-carbon steel with a milled groove was used in forming the reverse side of the seam. Specimens 40, 50, and 62mm thick, consisting of two plates, were welded in testing the one side, single pass method. Analyses of the macro- and microstructure of the seam metal show high density and the absence of pores and slag inclusions both in seam cross section and in places where the plates join the seam. The results show that single pass, one sided welding of sheets up to 70mm is possible without preheating and edge shaping.

1/1

- 65 -

USSR

UDC: 532.526

LAVROV, Yu. V., FILIPPOV, V. M.

"Experimental Investigation of the Transition From a Laminar to a Turbulent Boundary Layer on the Walls of the Working Section of a Wind Tunnel"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of Central Aerohydrodynamics Institute), 1972, 3, No 2, pp 60-68 (from RZh-Mekhanika, No 9, Abstract No 9B861)

Translation: Experimental studies are done on the transition from a laminar to a turbulent boundary layer on the side walls of the working section of a low-turbulence wind tunnel. Relations are found for the main statistical characteristics of the transition region (intermittence coefficient and intermittence number) as functions of the oncoming flow velocity and the coordinate of the given cross section, which are described by a normal law of distribution of random quantities. The studies are done with the aid of inductive pressure pickups, which almost completely eliminated the disturbing influence of the measuring instrumentation on the flow. Bibliography of 9 titles. Resumé.

1/1

USSR

UDC 629.78.018.1

LAVROV, YU. V. and FILIPPOV, V. M.

"Experimental Investigation of Laminar-to-Turbulent Boundary Layer Transition on the Walls of Wind Tunnel"

Uch. Zap. Tsentr. Aerogidrodinam. In-ta (Scientific Writings of the Central Aerohydrodynamics Institute), Vol 3, No 2, 1972, pp 60-68 (from Referativnyy Zhurnal--Raketostroyeniye, No 8, 1972, Abstract No 8.41.97)

Abstract: Experimental studies of the transition from a laminar-to-turbulent boundary layer on the side walls of the working part of a low turbulence wind tunnel have been conducted. Relationships of the basic statistical characteristics in the transition region (coefficient and number of intermittence) to the velocity of inflow and coordinates of the investigated cross section were obtained which are described by the normal law of random value distribution. The investigations were carried out with the aid of inductive sensors of pressure that to almost fully remove the disturbing effect of the measuring equipment on the flow. Author's view, 6 figures, 9 bibliographical references.

1/1

USSR

UDC: 533.6.08

FILIPPOV, V. M.

"A Hot-Wire Anemometer Attachment for Measuring Transverse Pulsations of Velocity"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 8, Mar 72, Author's Certificate No 330389, Division G, filed 29 Dec 69, published 24 Feb 72, p 138

Translation: This Author's Certificate introduces a hot-wire anemometer attachment for measuring transverse pulsations of velocity. The device contains electrically conductive supports to which the sensing element is fastened. As a distinguishing feature of the patent, the sensitivity of the attachment is increased and measurement accuracy is improved by making the sensing element in the form of a banded filament shaped into a rhombus whose sides form the arms of a Wheatstone bridge. The plane of the rhombus is located with the longer diagonal in the direction of flow and forming an angle of 5-10° with it. The shorter diagonal is normal to the flow. The first downstream support and the two side supports are at an angle of 10-20° to the plane of the rhombus.

1/1



USSR

FILIPPOV, V. M., and STRUMINSKIY, V. V.

"Experimental Investigation of the Appearance and Development of Turbulence in Pipes"

V sb. Turbulentn. techeniya (Turbulent Flows -- Collection of Works), Moscow, "Nauka," 1970, pp 240-246 (from RZh-Mekhanika, No 1, Jan 71, Abstract No 1B678 by authors)

Translation: It is shown that in laminar-turbulent transition there first appear therein clearly pronounced sinusoidal oscillations, the development of which subsequently leads to the formation of individual turbulent centers. The dependence of intermittance coefficient and number on Reynolds number is described comparatively well by an integral function and density function of normal error distribution law respectively. Investigations were conducted by the scattered-light method using a special hydraulic device of the closed type with a square- and round-section working part.

1/1

USSR

UDC 621.396.677(02) 6

ARDAB'YEVSKIY, A. I., VOLKOV, O. A., VOSKRESENSKIY, D. I., GOSTYUKHIN, V. L.,  
GRANOVSKAYA, R. A., GRINEVA, K. I., KRITSYN, V. A., MYAKISHEV, B. YA., FILIPPOV,  
V. S., CHEBYSHEV, V. V.

"Microwave Antennas and Devices. Calculation and Design of Antenna Arrays  
and their Radiating Elements. Textbook for Students at the Radiotechnical  
Specialized Institutions of Higher Learning"

Antennyy i ustroystva SVCh. Raschet i proyektirovaniye antennoykh reshetok i ikh  
izluchayushchikh elementov. Uchebn. posobiye dlya stud. radiotekhn. spets. vyzov  
(cf. English above), Moscow, Soviet Radio, 1972, 320 pp, ill., 75 k. (from RZh-  
Radiotekhnika, No 6, Jun 72, Abstract No 5B32K)

Translation: Methods of calculating the basic parameters of antenna arrays  
with electric rocking of the radiation pattern and frequency and commutation  
methods of controlling the radiation pattern are discussed. A study is made  
of the structure of the optimal arrays with Dolf-Chebyshev distribution, the  
design of irised-wave guide and horn arrays and also methods of calculating  
the array elements: dielectric, rod, spiral, horn and director antennas.

1/1

USSR

UDC: 621.396.677

GRINEV, A. Yu., FILIPPOV, V. S.

Investigation of the Characteristics of Convex Monopulse Antennas"

Tr. Mosk. aviats. in-ta (Works of the Moscow Aviation Institute), 1970, vyp. 203, pp 4-22 (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2224)

Translation: Problems of optimum excitation of convex monopulse antennas are considered in the optical physics approximation. An investigation is made of the possibility of approximating the radiation pattern of a convex antenna by using the radiation pattern of a cophased flat aperture; the approximation error is determined. Expressions are derived for the slope of the difference radiation pattern in the direction of the antenna bearing, and for the optimum amplitude-phase distribution of magnetic currents on an ideally conducting spherical antenna surface. Two illustrations, bibliography of seven titles. N. S.

1/1

USSR

UDC 535.13

FEDOROV, F. I., and FILIPPOV, V. V.

"Trajectories and Energy Flow Lines of Non-Uniform Electromagnetic Waves in an Isotropic Absorbing Medium"

Leningrad, Optika i Spektroskopiya, Vol 35, No 1, Jul 73, pp 135 - 141

**Abstract:** Expressions are found for the trajectory and flow lines of the energy of a non-uniform electromagnetic wave of arbitrary polarization in an isotropic absorbing medium. As in the case of a transparent medium, the instantaneous velocity of energy transportation in the direction of phase movement is not equal to the phase velocity but can be either greater or less. The energy movement occurs along one of two possible types of trajectories. Circularly polarized waves are an exception; their phase and energy movements are synchronized and linear. In contrast to a transparent medium, the energy of non-uniform waves in an absorbing medium can move for some period of time in a direction opposite to that of the phase movement.

Since the electromagnetic waves in an absorbing medium are almost always non-uniform, the question is of considerable interest, even making some simplifying assumptions. The present study assumes no dispersion and represents the dielectric permeability of the medium by a complex number, the imaginary portion of which represents losses in the medium of an unspecified nature.

1/1

- 95 -

USSR

UDC 621.372.542.29

SHIL'NIKOV, Yu. R., FILIPPOV, V. V., GALAKTIONOVA, G. M.

"A Ferrite Filter"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, Feb 72, Author's Certificate No 327541, Division H, filed 28 Sep 70, published 26 Jan 72, p 155

Translation: This Author's Certificate introduces a ferrite filter for low frequencies in the microwave band. The filter contains a transmission line, an electromagnet and a single-crystal ferrite disc. As a distinguishing feature of the patent, losses are reduced and the range of frequency adjustment is increased by locating the above-mentioned ferrite disc inside a polycrystalline ferrite toroid whose height is equal to the thickness of the disc.

1/1

1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--MODELING OF BIOTIN BIOSYNTHESIS. 2. INTRODUCTION OF OXYGEN AND  
SULFUR ATOMS INTO MOLECULES OF 2-IMIDAZOLINONE DERIVATIVES -U-  
AUTHOR--(05)--RODIONOVA, N.A., UNANYAN, M.P., KONDRATYEVA, G.V., ZAVYALOV,  
S.I., FILIPPOV, V.V.  
COUNTRY OF INFO--USSR F

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3) 560-5

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--IMIDAZOLE, KETONE, ORGANIC SULFUR, BIOSYNTHESIS, GLYCINE,  
SERINE, VITAMIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1999/1764

STEP NO--UK/0062/70/000/003/0660/0665

CIRC ACCESSION NO--AP0123563

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123563

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING 3.5 G 4-METHYL, 2-IMIDAZOLINONE WITH 1.1 G PARAFORMALDEHYDE AND 1-2 DROPS ET SUB3 IN MEQH 3 HR GAVE 4(5), METHYL, 5(4), HYDROXYMETHYL, 2-IMIDAZOLINONE, DECOMPO. LARGER THAN 300DEGREES. SIMILAR REACTION WITH PARAFORMALDEHYDE IN THE PRESENCE OF PIPERIDINE IN MEQH 4 HR GAVE 58PERCENT 4(5), METHYL, 5(4), PIPERIDINOMETHYL, 2-IMIDAZOLINONE, DECOMPO. SMALLER THAN 290DEGREES, ALSO PREPD. FROM 1,3-DIACETYL, 4(5), METHYL, 5(4), BROMOMETHYL, 2-IMIDAZOLINONE AND PIPERIDINE. HYDROXYDEHYDRODETHIOBIOTIN AND PARAFORMALDEHYDE REFLUXED IN ETOH 3 HR GAVE HYDROXYDEHYDRODETHIOBIOTIN, DECOMPO. LARGER THAN 280DEGREES. 1,3-DIACETYL, 4(5), BROMOMETHYL, 2-IMIDAZOLINONE AND ACSK IN ME SUB2 CO OVERNIGHT GAVE 36PERCENT 1,3-DIACETYL, 4(5), (ACETYLTHIOMETHYL) 2-IMIDAZOLINONE, M. 49-51DEGREES. SIMILARLY WAS PREPD. THE 4(5), ME ANALOG, M. 67-80DEGREES AND 1,3-DIACETYL, 4, 5, BIS(ACETYLTHIOMETHYL), 2-IMIDAZOLINONE, M. 106-7DEGREES, AND 1,3-DIACETYL, 4(5), (ACETYLTHIOMETHYL), 5(4), DELTA-CARBETHOXYVALEROYL, 2-IMIDAZOLINONE, M. 109-10DEGREES, WHICH WITH N-BRUCOSUCCINIMIDE IN REFLUXING CCL SUB4 GAVE IN 1 HR AN OIL, WHICH TREATED WITH ACSK, THEN WITH AQ. KMNO SUB4, GAVE AFTER FINAL HEATING 3 HR WITH AQ. HCL 1,3-DIACETYL, 4(5), (ACETYLTHIOMETHYL), 5(4), (CARBETHOXYANYL), 2-IMIDAZOLINONE, OIL. A POSSIBLE SCHEME OF BIOGENESIS OF BIOTIN FROM SERINE, GLYCINE AND DETHIOBIOTIN WAS DISCUSSED. FACILITY: INST. ORG. KHIM. IX. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 535.39.01

FEDOROV, F. I., and FILIPPOV, V. V.

"Amplitude Relationships for Light Waves at the Boundary Between a Uniaxial Crystal and an Isotropic Medium"

Leningrad, Optika i Spektroskopiya, Vol 30, No 2, 1971, pp 318-322

Abstract: Simplified general expressions are presented for the fields of light waves reflected and refracted at the boundary between a uniaxial transparent crystal and an isotropic medium. Cases are analyzed in which one or both reflected waves are absent.



1/2 005 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--COMPARATIVE DATA ON INFECTION RATE OF DIFFERENT GROUPS OF SKELETAL  
MUSCLES OF CATTLE WITH C. BOVIS -U-  
AUTHOR--(02)--FILIPPOV, V.V., KOSMINKOV, N.YE.  
COUNTRY OF INFO--USSR  
SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL  
39, NR 3, PP 306-310  
DATE PUBLISHED--70  
SUBJECT AREAS--AGRICULTURE  
TOPIC TAGS--MUSCULOSKELETAL SYSTEM, PARASITE, COMMERCIAL ANIMAL,  
VETERINARY SCIENCE  
CTRL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--2000/0218 STEP NO--UR/0358/70/039/003/0306/0310  
CIRC ACCESSION NO--AP0123984  
UNCLASSIFIED

2/2 005

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123984

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD OF HELMINTHOLOGIC SECTIONS (AFTER SKRYABIN) WAS USED FOR EXAMINATION OF 2024 SKELETAL MUSCLES FROM 11 CALVES PREVIOUSLY INOCULATED WITH C. BOVIS. PRACTICALLY ALL MUSCLES OF THE BODY, HEAD AND EXTREMITIES WERE EXAMINED FROM EACH CALF FOR ELUCIDATION OF THE INTENSITY OF THEIR INVASION WITH CYSTICERCS. THE INTENSITY AND EXTENSITY OF INVASION WAS FOUND TO BE THE HIGHEST IN ALL THE 11 CALVES IN THE MASSETERIC MUSCLES FOLLOWED BY COXOFEMORAL MUSCLES. AMONG THE FORMER M. MASSETER AND M. PTERYGOIDES WERE MOST INTENSIVELY INVADDED, AND AMONG THE LATTER M. BICEPS FEMORIS AND RM. GLUTEUS SUPERFICIALIS, MEDIUS, PROFUNDUS. BY THE INTENSITY OF INVASION M. QUADRICEPS FEMORIS WAS SECOND AFTER MASSETER MUSCLES. THE EVIDENCE OBTAINED SUGGEST THAT ADDITIONAL EXAMINATION OF THE TONGUE, M. QUADRICEPS FEMORIS AND M. BICEPS FEMORIS AS WELL AS GLUTEUS MUSCLES SHOULD BE RECOMMENDED FOR IMPROVEMENT OF THE QUALITY OF VETERINARY SANITARY EXAMINATION OF BOVINE CARCASSES FOR MEASLES, AND NOT EXAMINATION OF CUBITAL MUSCLES AS RECOMMENDED NOW. THE ADDITIONAL EXAMINATIONS SUGGESTED WILL UNDOUBTEDLY PROVIDE BETTER PREVENTION OF HUMAN INFECTION WITH TAENIARHYNCHOSIS. FACILITY: KAFEDRA PARAZITOLOGII I BIOLOGII, MOSKOVSKOGO TEKHNOLOGICHESKOGO INSTITUTA MYASNOY I MOLOCHNOY PROMYSHLENNOSTI.

UNCLASSIFIED

USSR

UDC 548.0:535.01

F  
FEDOROV, F. I. and FILIPPOV, V. V.

"Heterogeneous Waves at the Boundary of a Uniaxial Crystal and an Isotropic Medium"

Leningrad, Optika i Spektroskopiya, Vol 29, No 1, 1970, pp 56-61

Abstract: In an earlier paper by these same two authors (Zhurnal prikladnoy spektroskopii, 9, 1031, 1968) a solution was obtained, by means of covariant methods, of the problem of refraction and reflection of light incident on an isotropic medium after passing through a transparent uniaxial crystal. This article is devoted to the conditions under which the refracted or reflected waves become heterogeneous waves. The authors begin their analysis by rigorously defining, in vector form, the angle of incidence and the boundary angle at which the heterogeneous waves originate. They consider complete reflection, with heterogeneous waves in the isotropic medium, and then consider heterogeneous waves in the crystal. Finally, they consider the reverse case, in which the incident light emerges from the isotropic medium and strikes the interface between medium and crystal. They derive an equation which gives the condition for limiting angles of refraction for an unusual wave in the crystal and which leads also to the condition of full reflection and a correspondingly limited angle of incidence.

1/1

USSR

UDC 621.3.049.63

PETROV, E. M., KHRICHEV, L. I., FILIPPOV, V. Ye., LUPANOV, V. Ye., ZABORSKIY, V. N., ISAYEV, V. S.

"A Device for Attaching Wire Leads to the Contact Areas of Integrated Circuits"

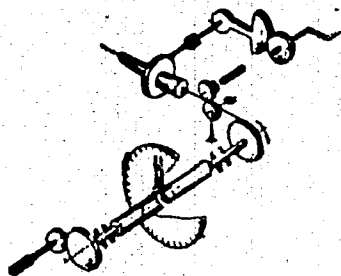
Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 7, Mar 71, Author's Certificate No 295217, Division H, filed 21 Apr 69, published 4 Feb 71, p 172

Translation: This Author's Certificate introduces a device for attaching wire leads to the contact areas of integrated circuits. The device contains a drum on which a wire is wound, drive rolls, a guide capillary and a unit for checking the strength of the joint between the leads and the contact areas. As a distinguishing feature of the patent, the precision of measuring this joint strength is improved by fastening the drum on one end of a torsion spring carrying an angle-of-turn indicator, the other end of this spring being connected to the drive mechanism.

1/2

USSR

PETROV, E. M., et al., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 7, Mar 71, Author's Certificate No 295217, Division H, filed 21 Apr 69, published 4 Feb 71, p 172



2/2

- 54 -

1

USSR

UDC 546.185:547.245

VOLODIN, A. A., KIREYEV, V. V., KOSHAK, V. V., FILIPPOV, YE. A., CHUKOVA, V. H.

"Synthesis of Cyclolinear Alkoxyphosphazenes and an Investigation of Their Reaction with Triphenylchlorosilane"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 7, Jul 72, pp 1503-1506

Abstract: Alkoxy derivatives of cyclolinear type were synthesized by alcoholysis of 2,2'-bis(trichlorophosphazene)tetrachlorocyclotriphasotriene in the presence of triethyl amino. The resultant alkoxyphosphazenes are yellowish liquids. The alkoxyphosphazenes react with triphenylchlorosilane when heated above 90°C with release of alkyl chloride and formation of the corresponding siloxy derivative. The reaction products from equimolecular quantities of initial reagents are brown viscous liquids which dissolve in benzene. Analysis of the conditions of the reaction and kinetic data indicate that replacement of the alkyl groups by the triphenylsilyl group takes place in the side chain.

1/1

- 26 -

USSR

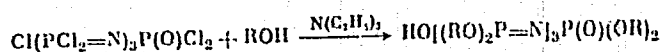
UDC 547.26'118

VOLODIN, A. A., KIREYEV, V. V., KORSHAK, V. V., and ~~FILIPPOV, Ye. A.~~

"Synthesis and Investigation of Alkoxytriphosphazophosphonyls"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 3, Mar 72, pp 510-514

Abstract: The authors synthesized and studied alkoxy derivatives of the following member of the homologous series of linear alkoxyphosphazines --  $\text{HO}[\text{P}(\text{OR})_2=\text{N}]_n\text{P}(\text{O})(\text{OR})_2$  ( $n = 1$  and  $2$ ). The compounds were synthesized by alcoholysis of heptachlorotriphosphazodichlorophosphonyl in the presence of triethylamine.



The resultant alkoxytriphosphazophosphonyls are brown viscous oils with a faint odor. Some of the physical and chemical properties of the compounds are tabulated. A study of the kinetics of the reaction between alkoxytriphosphazophosphonyls and triphenylchlorosilane shows that the reaction mechanism is close to that previously proposed for imidodiphosphoric acid and alkoxydiphosphazophosphonyls, and includes a stage of ionization of the P-O-C bond with formation of a carbonium ion which attacks the chlorosilane molecule. One table, two figures, bibliography of four titles.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--POSSIBLE FIELD OF APPLICATION OF NEUTRON NEUTRON METHOD IN  
GEOPHYSICS -U-  
AUTHOR-(02)-VAKHTIN, B.S., FILIPPOV, YE.M.  
COUNTRY OF INFO--USSR  
SOURCE--GEOLOGIYA I GEOFIZIKA, 1970, NR 2, PP 72-81  
DATE PUBLISHED-----70  
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, PHYSICS  
TOPIC TAGS--NEUTRON DETECTOR, GEOPHYSICS, SILVER, INDIUM  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1986/1227 STEP NO--UR/0210/70/000/002/0072/0031  
CIRC ACCESSION NO--AP0103115  
UNCLASSIFIED



2/2 020

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103115  
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE RESULTS OF INVESTIGATIONS ON FURTHER DEVELOPMENT OF NEUTRON NEUTRON METHOD, BASED ON REGISTRATION OF RESONANCE NEUTRONS (NNM,R) ARE LISTED IN THE PAPER. THE SILVER AND INDIUM DETERMINATIONS IN THE SAMPLES WERE CARRIED OUT USING NNM,R METHOD. THE FOILS OF DETERMINED JELEMENTS WERE USED AS NEUTRON DETECTORS. NNM,R WAS ALSO USED FOR DETERMINATION OF ELEMENTS WHICH FORM THE STABLE ISOTOPES BY NEUTRON CAPTURE, AS GOLD AND DISPROSIUM. THE EFFECT OF OVERLAPING OF THESE ELEMENTS RESONANCE WITH SILVER RESONANCE WAS USED. INDIUM WAS DETERMINED USING RODIUM FOIL BY THE SAME WAY. THE RESULTS OF HIGH BORON CONCENTRATIONS DETERMINATION IN THE SAMPLES USING SILVER, RODIUM AND INDIUM FOILS AS NEUTRON DETECTORS ARE LISTED. THE FLATTENING OF CALIBRATING CURVES, BEING CHARACTERISTIC FOR NEUTRON NEUTRON METHOD ON HEAT NEUTRONS IS DIVERTED.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--DISORDERS IN THE SYSTEM OF SEX CHROMOSOMES IN SCHIZOPHRENIC FEMALES

-U-  
AUTHOR--FILIPPOV, YU.I.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970,  
VOL 70, NR 5, PP 715-717  
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHROMOSOME, SCHIZOPHRENIA, PSYCHIATRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1996/0239

STEP NO--UR/0246/70/070/005/0715/0717

CIRC ACCESSION NO--AP0117491

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 019

CIRC ACCESSION NO--AP0117491

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STUDY CONCERNS SEX CHROMATINE IN 2000 MENTAL FEMALE PATIENTS. A DOUBLE SEX CHROMATINE WAS DEPICTED IN 6 FEMALES WITH SCHIZOPHRENIA WHICH IS EQUIVALENT TO 0.45PERCENT OF THE TOTAL AMOUNT OF SCHIZOPHRENIC FEMALE PATIENTS (1333 CASES), 3 FEMALES HAD A GAMETIC TRISOMIA, X (47,XXX) AND IN 3 CASES THERE WAS A MOSAICITY (46,XX-47,XXX). A PRELIMINARY STUDY OF THE PSYCHOSES IN SUCH CASES, DISPLAYED THAT THE PATIENTS WITH A GAMETIC TRISOMIA-X BELONGED TO A MORE MALIGNANT VARIETY OF THE CONTINUOUS FORMS OF SCHIZOPHRENIA. IN MOSAIC FEMALES THE SCHIZOPHRENIC PROCESS HAD A MORE FAVORABLE DEVELOPMENT (THE SHIFT LIKE FORM). FACILITY: LABORATORIYA MEDITSINSKOY TSITOGNETIKA, INSTITUTA MORFOLOGII CHELOVEKA AMN SSSR AND LABORATORIYA OBSHCHEY PATOFIZIOLOGII INSTITUTA PSIKHIATRII AMN SSSR, MOSCOW.

UNCLASSIFIED

USSR

UDC 612.014.481/.482

LAVROV, B. A., FILIPPOV, Yu. M., and YANOVSKAYA, B. I.

"Comparative Study of the Biological Effect of Different Kinds of Radiation -- 600 Mev Protons, X- and Gamma Rays"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 10, 1971, pp 47-49

Abstract: Changes in the weight of rat spleen and gonads and in the ascorbic acid content of these organs and bone marrow were traced after irradiation of the animals with equal absorbed doses of X-rays and protons (400 rads) and gamma rays and protons (600 rads). X-rays and protons caused similar changes in the above indexes, but X-irradiation produced deeper and more stable disturbances in the hematopoietic tissues. Both types of irradiation caused similar changes in the weight of the gonads and their ascorbic acid content. Gamma rays induced sharper decreases in the weight of the spleen and ascorbic acid content of the spleen and bone marrow than did protons. However, reversal of these impairments started sooner after proton irradiation, suggesting that the RBE of protons with respect to the spleen and bone marrow is less than that of gamma rays. The effects of equal doses of gamma rays and protons on the gonads were virtually identical.

1/1

1/2 018 UNCLASSIFIED PROCESSING DATE--0206170  
TITLE--REACTION OF THE VINYL ETHER OF P,NITROPHENOL WITH BUTANETHIOL UNDER  
NUCLEOPHILIC THIYLATION CONDITIONS -U-  
AUTHOR--(03)-DUBINSKAYA, E.I., FILIPPOVA, A.KH., SHOSTAKIVSKIY, M.F.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. ORG. KHIM. 1970, 6(3) 630  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--ARYL ETHER, PHENOL, BUTANE, THIOL, ORGANIC NITRO COMPOUND,  
CHEMICAL SYNTHESIS, CHROMATOGRAPHY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REL/FRAME--1992/1543 STEP NO--UR/0366/70/000/003/0530/0530  
CIRC ACCESSION NO--AP0112537  
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--02NOV70

CIRC ACCESSION NO--AP0112537

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SEALED TUBE REACTION OF P-H  
SUB2 C:CHOC SUB6 H SUB4 NO SUB2 WITH BUSNA IN ETOH AT 85DEGREES GAVE  
P-BUSC SUB6 H SUB4 N(D):NC SUB6 H SUB4 S-BU-P AND A SMALLER AMT. P-BUSC  
SUB6 H SUB4 N:NC SUB6 H SUB4 SBU-P. THE COMPS. WERE SEPD. BY  
CHROMATOG. ON AL SUB2 O SUB3.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--EFFECT OF ALKALI METAL CATIONS ON THE FORMATION OF CERAMIC PIGMENTS  
OF THE CALCIUM OXIDE STANNIC OXIDE SILICON DIOXIDE SYSTEM -U-  
AUTHOR--(02)-TUMANOV, S.G., FILIPPOVA, E.A.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 814-17  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS  
TOPIC TAGS--CERAMIC MATERIAL, CALCIUM OXIDE, TIN OXIDE, SILICON DIOXIDE,  
BORIC ACID, CHROMIUM OXIDE, LITHIUM OXIDE, CERAMIC PIGMENT  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3003/1459 STEP NO--UR/0363/70/006/004/0814/0817  
CIRC ACCESSION NO--AP0130392  
UNCLASSIFIED

2/2 011  
CIRC ACCESSION NO--AP0130392 UNCLASSIFIED  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MORE THAN 1PERCENT OF ALKALI  
OXIDES IN THE COMPN. OF PINK PIGMENTS HAS A DETRIMENTAL EFFECT ON THE  
COLORATION. THE MOST DETRIMENTAL EFFECT IS OBSERVED IN CASE OF LI SUB2  
O. ALKALI OXIDES ENHANCE THE SINTERING OF THE BATCH DURING FIRING,  
WHICH INTENSIFIES WITH THE DECREASE IN THE IONIC RADIUS OF THE CATION  
AND WITH AN INCREASE IN THE ENERGY COEFF. DURING THE PREPN. OF CR-SN  
PINK PIGMENTS THE USE MUST BE AVOIDED OF RAW MATERIAL CONTG. ALKALI  
METAL CATIONS. INSTEAD OF K SUB2 CR SUB2 O SUB7, WHICH IS GENERALLY  
USED IN THE PRODUCTION OF PINK PIGMENTS, IT IS MORE EXPEDIENT TO USE CR  
SUB2 O SUB3, WHICH GIVES A MORE PURELY RED COLORATION, AND BORIC ACID  
SHOULD BE USED INSTEAD OF BORAX.  
FACILITY: DULEVSKII KRASOCHNYI  
ZAVOD, USSR.

UNCLASSIFIED



USSR

UDC 575.111:575.24:576.851.48

FILIPPOVA, L. M., LIKHODED, V. G., and RAPOPORT, I. A., Institute of Chemical Physics, Academy of Sciences USSR, and Scientific Research Institute of Vaccines and Sera imeni I. N. Mechnikov, Ministry of Health USSR, Moscow

"The Effects of N-Nitroso-N-Methylurea on Escherichia Coli Strains Differing in Their Capacity for Excision Repair of DNA Lesions"

Moscow, Genetika, Vol 7, No 11, 1971, pp 130-135

Abstract: Mutagenic and lethal effects were produced in  $hcr^+$  and  $hcr^-$  E. coli K-12 strains by using different amounts of N-nitroso-N-methylurea (NMU). Almost identical results were obtained on  $hcr^+$  and  $hcr^-$  strains. Strains were unable to repair the damaged chromosomes through excisions, and synthesized neither colicin E1 nor gamma prophages in any significant amounts. Since NMU, like all monoalkylating agents, exerts its effects by alkylating purine bases in DNA, it is suggested that the difference in the mechanism of action of monoalkylating and bialkylating agents may be responsible for the inactivation of the bacteria.

USSR

UDC 576.852.23.097.29.07

APANASHCHENKO, N. I., FILIPPOVA, L. M., and KHLEBNIKOVA, N. N., Institute of Epidemiology and Microbiology imeni Gamaleya and Moscow Institute of Epidemiology and Microbiology

"Study of Diphtheria Toxins and Toxoids by Disk Electrophoresis in Polyacrylamide Gel"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971, pp 37-42

Abstract: Study of 24 purified diphtheria toxins and toxoids prepared by the reactor and stationary methods showed that the toxoids are electrophoretically more mobile than the toxins and the toxoids obtained by the reactor method are more heterogeneous (they contain 7 or 8 fractions) than those obtained by the stationary method (4 to 6 fractions). To determine which of the fractions detected in polyacrylamide gel is the cellular component of diphtheria toxoid and which is the toxic component, purified stationary toxoid was separated by gel filtration on Sephadex G-200 into its cellular (precipitating with antibacterial serum) and toxic (flocculent) components. The cellular antigen in polyacrylamide gel divided into two fractions. The more pronounced one had less electrophoretic mobility and was located at the cathode end of the electrophoregram.

1/2

USSR

APANASHCHENKO, N. I., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971, pp 37-42

(cellular antigen), while the other fraction was barely perceptible but possessed greater electrophoretic mobility and was located at the anode end. The toxic component separated into four fractions: two of them, the more massive, were located in the center and closer to the anode end; the other two, barely perceptible, were located as in the microbial component.

2/2

- 19 -

Oncology

UDC 575.24

USSR

RAPOPORT, I. A., Doctor of Biological Sciences, and FILIPPOVA, L. M.,  
Candidate of Biological Sciences

"Chemical Mutagens and Antimutagens and Their Significance for the Gene  
Pool and Carcinogenesis"

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva im. D. I. Mendeleeva,  
No 6, 1970, pp 681-689

Abstract: Research on the genetic danger posed by chemicals widely used in industry, agriculture, and daily life is summarized. The results of studies on the capacity of various drugs, polymers, dyes, and so forth to induce point mutations and chromosome aberrations are presented. The part played by chemical mutagens in worsening the gene pool of mankind and in giving rise to malignant tumors is also discussed. The problem of developing antimutagens is a formidable one, because with the current state of knowledge such agents might also have a mutagenic effect and constitute a similar danger in another form.

1/1

1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--GENETIC ACTIVITY OF 1,4 BIS,DIAZOACETYL,BUTANE. II. EFFECT OF 1,4  
BIS,DIAZOACETYL,BUTANE ON HUMAN CHROMOSOMES IN VITRO -U-  
AUTHOR-(02)-GRINBERG, K.N., FILIPPOVA, L.M.

COUNTRY OF INFO--USSR

SOURCE--GENETIKA 1970, 6(2), 148-51

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GENETICS, CHROMOSOME, EMBRYOLOGY, DRUG EFFECT, MITOSIS, DNA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1998/0650

STEP NO--UR/0473/70/006/002/0148/0151

CIRC ACCESSION NO--AP0121317

UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70  
CIRC ACCESSION NO--AP0121317  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HUMAN EMBRYO FIBROBLAST CELLS WERE  
TREATED WITH THE TITLE DRUG (0.1 MG-ML) FOR 4 OR 14 HR. AN INCREASED  
ABERRATION FREQUENCY WAS OBSERVED WHEN THE CELLS WERE TREATED FOR 4 HR.  
THE MOST SENSITIVE STAGE OF THE MITOTIC CYCLE WAS THAT OF DNA SYNTHESIS.  
ALL ABERRATIONS WERE OF THE CHROMATID TYPE. FACILITY: INST.  
HUMAN MORPHOL., MOSCOW, USSR.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--GENETIC ACTIVITY OF 1,4,BIS,DIAZOACETYL,BUTANE. I. ABILITY OF  
1,4,BIS,DIAZOACETYL,BUTANE TO INDUCE GENE MUTATIONS AND CHROMOSOME  
AUTHOR-(02)-FILIPPOVA, L.M., GRINBERG, K.N.

COUNTRY OF INFO--USSR

SOURCE--GENETIKA 1970, 6(1), 92-5

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DROSPHILA, MUTAGEN, BUTANE, ORGANIC NITROGEN COMPOUND,  
CHROMOSOME, GENETICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3003/1148

STEP NO--UR/0473/70/006/001/0092/0095

CIRC ACCESSION NO--AP0130176

UNCLASSIFIED

Z/2 009

UNCLASSIFIED

PROCESSING DATE--27NOV70

CTRC ACCESSION NO--AP0130176

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ABILITY OF  
1,4,BIS(DIAZOACETYL)BUTANE TO INDUCE GENERAL GENE MUTATIONS WITHOUT  
STRUCTURAL DAMAGE OF CHROMOSOMES WAS TESTED IN D. MELANOGASTER. NO  
DETACHMENT OF ATTACHED X CHROMOSOMES IN OOCYTES WAS INDUCED BY THE  
HIGHLY EFFECTIVE MUTAGEN. FACILITY: INST. CHEM. PHYS., MOSCOW,  
USSR.

UNCLASSIFIED



1/2 008 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--GENETIC ACTIVITY OF 1,4,BIS,DIAZOACETYL,BUTANE. III. CYTOGENETIC  
ACTION OF 1,4,BIS,DIAZOACETYL,BUTANE ON PLANTS -U-  
AUTHOR-(02)-FILIPPOVA, L.M., GRINBERG, K.N.

COUNTRY OF INFO--USSR F

SOURCE--GENETIKA 1970, 6(3), 38-41

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLANT GENETICS, MUTAGEN, AZO COMPOUND, BUTANE, CHROMOSOME

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3007/1980

STEP NO--UR/0473/70/006/003/0038/0041

CIRC ACCESSION NO--AP0137159

2/2 008

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137159

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ALLIUM FISTULOSUM AND CREPIS  
CAPILLARIS SEEDS DO NOT SHOW MORE CHROMOSOMAL ABERRATIONS THAN CONTROLS  
AFTER BEING SOAKED 4 HR IN A 1:10 NEGATIVE PRIME4 SOLN. OF THE TITLE  
MUTAGEN. FACILITY: INST. CHEM. PHYS., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 547.091:632.936.2

KOVALEV, B. G., ISHCHENKO, R. I., MARCHENKO, V. A., and FILIPPOVA, M. P.,  
All Union Scientific Research Institute of Biological Methods of Plant Protection, Kishinev

"Synthetic Studies in the Area of Insect Attracting Materials (Sex Attractants).  
I. Synthesis of 2-Methyl-7-octadecene Oxide (Disparlure) -- Sex Attractant  
of Gypsy Moth *Parthetria Dispar* L."

Leningrad, Zhurnal Organicheskoy Khimii, Vol 9, No 1, Jan 73, pp 6-8

Abstract: Alkylation of dodecynyllithium with isoheptyl bromide was carried out in phosphoric acid hexamethyltriamide. The reaction product -- 2-methyl-7-octadecyne (I) -- was hydrogenated in hexane over Lindlar catalyst yielding cis-2-methyl-7-octadecene. This material was epoxidized with monoperphthalic acid in chloroform, yielding Disparlure. Reduction of (I) with sodium in liquid ammonia yielded trans-2-methyl-7-octadecene which could be used for production of trans-disparlure. Preliminary field trails showed this synthetic material to be biologically active in 0.25-0.01 mg dose per trap, retaining their sex attracting activity for prolonged periods under field conditions.

1/1

USSR

UDC 595.421:559.42

FILIPPOVA, N. A., Zoological Institute, Academy of Sciences USSR, Leningrad

~~W. F. FILIPPOVA~~

"New Data on Ticks of the Genus *Ixodes* Latr. (IXodoidea, Ixodidae),  
Specific Bar Parasites"

Leningrad, Entomologicheskoye Obozreniye, Vol 51, No 2, 1972, pp 463-475

Abstract: Two bat-specific ticks are described on the basis of collections at the Zoological Institute, and their taxonomy is altered. *Ixodes pomerantzevella simplex* Neumann is concluded to be identical to *I. pospelovae* and *I. chiroptororum*, described previously. Found this far in the Carpathians and in the Caucasus and adapted to foothill and montane regions, this species parasitizes *Miniopterus schreibersi* Kuhl. *Myotis oxygnathus* Monticellu, and *Myctalus leisleri* Kuhl. *Ixodes eschatocephalus vespertilionis* Koch has been found in the Carpathians, the Crimea, Transcaucasus, and Central Asia. It also is adapted to foothills and mountains, but it parasitizes a greater number of bats including *Myotis oxygnathus*, *M. myotis* Borkhhausen, *Rhinolophus ferrumequinum* Schreber, *Rh. mehelyi* Matschie, and *Rh. sp. I. simplex* appears to prefer *M. schreibersi*, and *I. vespertilionis* seems to prefer genus *Rhinolophus*. Such preferences agree with descriptions of the ticks in other countries. It was possible to distinguish these species with respect to females, nymphs, and larvae.

1/1

- 69 -

USSR

UDC 911.3:616.988.25(47+57)

ELIPPOVA, N. A., USHAKOVA, G. V., and BELYAEV, V. G.

"Results in the Revision of Group I. persulcatus Species in Native Foci of Tickborne Encephalitis"

V sb. Vtoroye Acarologicheskoye soveshchaniye. Ch. 2. Tezisy dokl.  
(Second Acarological Conference. Part 2. Theses of Reports -- collection of works) Kiev, "Nauk. dumka," 1970, pp 188-190 (from RZh-Meditsinskaya Geografiya, No 4, Apr 71, Abstract No 4.36.58)

[No abstract]

1/1

USSR

FILIPPOVA, N. A.

"Problems of Parasitology at the Second All Union Acarological Conference"

Leningrad, Parazitologiya, No 5, 1971, pp 474-476

Abstract: The Second All Union Acarological Conference held in Kiev in April 1971 heard over 75 papers on parasitology, more than half devoted to ixodid ticks. The papers dealt mainly with the zoological aspects of parasitic ticks, relations between ticks and disease pathogens, and control of parasitic ticks and the diseases they transmit. Among the subjects discussed were the use of large-scale mapping as a means of studying the spatial structure of *I. persulcatus* in natural foci of tickborne encephalitis (T. A. Vershinina, B. V. Vershinskiy, et al.); the effect of changes in the host's hormonal balance on ticks (V. A. Aristova and L. I. Abramova); ecology, distribution, and biocenotic relations of blood-sucking ticks in natural foci of infections (V. V. Cherny and B. B. Rositskiy); distribution of each of six species of the *I. persulcatus* group and biocenotic relationships of these species in foci of tickborne encephalitis in the Altay, Tyan-Shan, and Far East (N. A. Filippova, G. V. Ushakova, and V. G. Belyayev); reasons for the persistence of *Dermacentor marginatus*, *Rhipicephalus rossicus*, and *Hyalomma plumbeum*

1/2

USSR

FILIPPOVA, N. A., Parazitologiya, No 5, 1971, pp 474-476

populations in a tularemia focus on Biryuchiy Island (Ye. M. Yemchuk); length of the developmental cycle and its individual phases in various ixodid ticks (L. V. Babenko, I. G. Uspenskaya, and Yu. N. Konovalov); role of ixodid ticks as vectors of arboviruses (L. K. L'vov and G. V. Gostinshchikova); and the behavior of Rickettsia prowazeki in argasid mites (V. F. Ignatovich and I. M. Grokhovskaya).

2/2

- 39 -

USSR

UDC 595.421

FILIPPOVA, N. A., Zoological Institute, Academy of Sciences USSR

"Species of the *Ixodes persulcatus* Group (Parasitiformes, Ixodidae). VI. Characteristics of the Ranges of *I. pavlovskyi* Pom. and *I. persulcatus* Schulze in Relation to Their Paleogenesis"

Leningrad, Parazitologiya, No 5, 1971, pp 385-391

Abstract: The range of *Ixodes pavlovskyi* is divided into two extensive areas. The western part of the zone embraces the southwestern, western, northwestern, northern, and northeastern Altai and adjacent uplands and mountainous regions of Western Siberia. The eastern part coincides largely with the ranges and uplands of the Amur and Ussuri basins and their numerous tributaries. The range of *Ixodes persulcatus* stretches from the Baltic Sea and Belorussia, Karelia, Kalinin and Kaluga oblasts to southwestern Siberia and then continues eastward mostly over the mountain taiga from the Altai to the Pacific Ocean, including the lower reaches of the Amur and Ussuri. *I. pavlovskiy* appears to be a relict of the Pliocene fauna. Its range contracted when the taiga was displaced by more heat-loving and humid broad-leaved Pliocene forests. In much of the western part of its range, in foci of tickborne encephalitis, *I.*

1/2



USSR

FILIPPOVA, N. A., Parazitologiya, No 5, 1971, pp 385-391

pavlovskiy is as abundant as I. persulcatus. Formation of the range of I. persulcatus was directly related to the development of the taiga landscape.

2/2

- 38 -

USSR

UDC: 576.895.421

FILIPPOVA, N. A., and BELYAYEV, V. G., Zoological Institute, Academy of Sciences USSR, Leningrad, and Primorskaya Antiplague Station

"Species of *Ixodes persulcatus* (Parasitiformes Ixodidae) Group. *Ixodes pavlovskyi* Pom. and *Ixodes nipponensis* Kitaoka et Saito in Primor'ye"

Leningrad, Parazitologiya, Vol 4, No 6, Nov/Dec 70, pp 515-523

Abstract: A study was made of the habitats of populations of *Ixodes pavlovskyi* Pom., *Ixodes nipponensis* Kitaoka et Saito, and *Ixodes persulcatus* Schulze ticks, their distribution, and certain ecological and morphological characteristics, particularly in the preimago phase. The *Ixodes pavlovskyi* ticks are widely distributed throughout a wide area. Its western part includes the Altay and adjacent northern and southern elevations and mountains, and its eastern part, the elevations and mountain crests of the Far East bordering the valleys of the Amur and Ussuri Rivers and their tributaries. The ticks are confined for the most part to coniferous-broadleaved and secondary leafy forests, and feed on rodents and some species of birds. As compared with *Ixodes persulcatus*, their number is relatively small.

1/2

USSR

FILIPPOVA, N. A., and BELYAYEV, V. G., Parazitologiya, Vol 4, No 6, Nov/Dec 70, pp 515-523

*Ixodes nipponensis* ticks are found in the southern and southwestern parts of Primorskiy Kray and along the coastal zone of Petr Velikiy Bay and its vicinity, mostly in grassy meadows, and marshes. They are also widely distributed in Japan. In its preimago phase, the tick is found on the field mouse *Apodemus agrarius* and the Far Eastern vole *Microtis fortis*. There are indications that it also parasitizes cattle, goats, horses, and dogs; it is also found on man. *Ixodes persulcatus* ticks are likewise found in these areas. Their number, however, is small as compared with that of *Ixodes nipponensis*. The male and female characteristics of *Ixodes nipponensis* ticks and their morphology, particularly in the preimago phase, are discussed in detail.

2/2

- 21 -

USSR

UDC 631.8 + 632.954:633

CHESALIN, G. A., FILIPPOVA, N. V., and TIMOFEYEVA, A. A., VIUA [An unknown abbreviation]

"The Role of Mineral Nutrition in Detoxification of Herbicides in Plants"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 10 (120), 1973, pp 47-50

Abstract: It has been shown that the absorption, accumulation, and detoxification of herbicides depended to a large extent on the conditions of mineral nutrition of the plants. The nutrition level affects the residual quantity of herbicides in the plant organs. In this fashion, regulating the nutrition of cultured plants, it is possible to lower the content of residual levels of herbicides in the crop and even to inactivate them completely in some plants during their period of vegetation.

1/1

USSR

UDC: 8.74

FILIPPOVA, N. V.

"System of Residual Classes With Two Bases"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1972, vyp. 9. (Physics and Mathematics Series), pp 213-216 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V615 by A. Maslov)

Translation: The author considers a system of residual classes consisting of two odd mutually simple bases. An overflow criterion is given for addition in the proposed system. The simplicity of performing division is noted.

1/1

- 46 -

USSR

UDC 8.74

YEVSTIGNEYEV, V. G., GORSKAYA, V. V., FILIPPOVA, N. V.

"Some Scaling Problems when Solving Problems in the System of Remainder Classes in the Nonredundant Arithmetic Range"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on the Problems of Microelectronics of the Moscow Institute of Electronic Engineering), 1972, vyp. 9, Physics and Mathematics Series, pp 200-212 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V578)

No abstract

1/1

- 62 -

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--DIFFERENTIAL MICROCALORIMETER FOR CONDUCTING QUANTITATIVE  
THERMOGRAPHY -U-  
AUTHOR-(03)-REZNITSKIY, L.A., KHOLLER, V.A., FILIPPOVA, S.YE.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 534-5  
DATE PUBLISHED-----70  
SUBJECT AREAS--METHODS AND EQUIPMENT  
TOPIC TAGS--CALORIMETER, THERMOGRAPHIC ANALYSIS, THERMAL EFFECT  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAHE--3002/0216 STEP NO--UR/0076/70/044/002/0534/0535  
CIRC ACCESSION NO--AP0127827  
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0127827

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MICROCALORIMETER IS OPERATED IN THE 25-700DEGREES RANGE WITH CONST. RECORDING OF EFFECTS. THE THRESHOLD SENSITIVITY OF THE DEVICE IS 4 MU V-MM, AND THE MAGNITUDE OF HEAT EFFECTS IS 25-40 CAL. THE MEAN DEVIATION OF EXPTL. DATA FROM THE LITERATURE VALUES IS SIMILAR TO 9PERCENT; THE AREA OF THE PEAK IS 850-1350 MM PRIME2. SAMPLES IN QUARTZ AMPULS WEIGH 0.6-6.0 G. FACILITY: KHIM. FAK., MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED



USSR

UDC: 533.9...16

FILIPPOVA, T. I., FILIPPOV, N. V.

"Plasma Focus as a Pulsed Source of Neutrons of Synthesis Reactions"

Kiev, Neytron. fizika--sbornik (Neutron Physics--collection of works), Ch. 2, "Nauk. dumka", 1972, pp 194-200 (from RZh-Fizika, No 6, Jun 73, abstract No 6G340)

Translation: The paper presents the physical principles of operation of an installation of the "plasma focus" type. Data are given on the number of neutrons per pulse, the pulse duration, and the pulse repetition rate. A curve is plotted for the neutron yield as a function of the energy reserve of the installation. The resultant curve is extrapolated to  $10^8$  j.

1/1

Acc. Nr. **AT0045326**

Abstracting Service:  
CHEMICAL ABST.

570

Ref. Code  
**UR0020**

**FILIPPOVA V.G.**

90910k Isomerization of active centers in the anionic polymerization of vinyltrimethylgermane. Nametkin, V. S.; Durgar'yan, S. G.; Tikhonova, L. I.; Filippova, V. G. (Inst. Neftekhim. Sin. im. Topchieva, Moscow, USSR). Dokl. Akad. Nauk SSSR 1970, 190(1), 114-17 (Chem) (Russ). Me<sub>3</sub>GeCH:CH<sub>2</sub> (I) polymd. slowly in heptane in the presence of BuLi at 35-45°. Thus, after 1150 hr at 3.41 mole/l. I concn. and 0.01 mole/l. BuLi concn., only 57% conversion was obsd. After an initial induction period, the polymn. rate was proportional to I concn. and the square root of the initiator concn. Addn. of butadiene to the reaction system after 300 hr did not cause it to polymerize, indicating the low activity of the I carbanions. The polymer chain growth is apparently complicated by deactivation of the active centers by a hydride transfer from the end of the growing chain to give LiH. This was confirmed by observation of C=C absorptions in the ir spectra of the polymer and by Br uptake corresponding to 2.2% double bonds.

DBJR

40

REEL/FRAME

**19780250**

7

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--COPOLYMERIZATION OF ALLYTRIMETHYL OR ALLYLDIMETHYLPHENYLSILANES  
WITH ACRYLONITRILES -U-  
AUTHOR-(04)-NAMETKIN, N.S., KOZHUKHOVA, I.N., FILIPPOVA, V.G., DURGARYAN,  
S.G.  
COUNTRY OF INFO--USSR  
SOURCE--VYSOKOMOL. SOEDIN., SER. 8 1970, 12(3), 180-2  
DATE PUBLISHED--70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--COPOLYMERIZATION, ORGANIC SILANE, ACRYLONITRILE, CHEMICAL  
KINETICS, BENZENE DERIVATIVE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--2000/0671 STEP NO--UR/0460/70/012/003/0180/0182  
CIRC ACCESSION NO--AP0124343  
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT7

CIRC ACCESSION NO--AP0124343

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COPOLYMN. KINETICS OF H SUB2 C:CHCH (I) WITH ME SUB3 SICH SUB2 CH: CH SUB2 (II) OR ME SUB2 PH SICH SUB2 CH:CH SUB2 (III) WAS STUDIED IN BULK OR KCONME SUB2 SOLN. IN THE PRESENCE OF BZ SUB2 O SUB2. THE DEPENDENCE OF THE COPOLYMER COMPN. ON THE COMPN. OF THE STARTING MONOMER MIXTS. WAS ESTABLISHED. THE REACTIVITY RATIOS (R) IN THE THE I-II COPOLYMN. WERE 3.98 FOR I AND 0.1 FOR II AND IN THE I-III COPOLYMN. 2.24 FOR I AND 0.20 FOR III. THE REACTIVITY FACTORS (Q) AND POLARITY FACTORS (E) WERE 0.036 AND 02.7 FOR II, AND 0.070 AND 0.30 FOR III, RESP. FACILITY: INST. NEFTEKHIM. SIN. IM. TOPCHIEVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 669.71.017:539.3/5.01

KUTAYTSEVA, Ye. I., FILIPPOVA, Z. G., and BOROVOV, S. A.

"The Effect of Thermomechanical Processing on Properties of the V96ts Alloy"

Metallovedeniye Splavov Legkikh Metallov-Sbornik, Moscow, "Nauka", 1970,  
pp 29-33, resume

Translation: The effect of thermomechanical processing on the properties of the V96ts high-strength alloy was investigated. A positive effect of the plastic deformation on the mechanical properties of the alloy was established. Three figures, two tables.

1/1

USSR

UDC 621.789-977:669.15-194.3

GAVRANEK, V. V. and FILIEPOVA, Z. K., Khar'kov Polytechnic Institute

"Stability of the Effect of HTSH on the Properties of 1Kh12VMF Steel"

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, No 2, 1972, pp 34-36

Abstract: A study has been made of the stability of the effect of high-temperature strain hardening (HTSH) -- under optimum specifications -- on the properties of 1Kh12VMF steel after tempering to 200-700°C and repeated hardening. The chemical composition of the test steel was: 0.16% C; 11.68% Cr; 0.60% Ni; 0.70% Mo; 0.30% V; 1.0% W; 0.62% Mn; 0.32% Si; 0.20% S and 0.025% P. The increased mechanical properties of 1Kh12VMF steel as a result of HTSH are retained up to high tempering temperatures as well as after repeated heat treating. Application of HTSH and tempering at 200°C to the steel increases its erosion resistance more than five-fold as compared to that following conventional treatment -- temper hardening at 680°C. HTSH with repeated hardening is recommended for machinable parts from 1Kh12VMF steel. (2 illustrations, 2 tables, 3 bibliographic references).

1/1

USSR

UDC: 669.781.053.4.068

ZHAYMINA, R. Ye., FILIPPOVA, Z. O., MUN, A. I.

"Absorption of Boron by AV-17 and EDE-10 Anionites from Aqueous Salt Solutions"

Tr. In-ta Khim. Nauk. An KazSSR [Works of Institute of Chemical Sciences, Academy of Sciences, KazSSR], 1972, No 36, pp 76-81 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G195, by the authors).

Translation: The influence of various salts on the adsorption of borate ions by the anionites AV-17 and EDE-10 is studied. The increase in the competing influence of ions in the sequence  $K^+ < Na^+ < Li^+$ ,  $Ba^{2+} < Ca^{2+} < Mg^{2+}$  and  $F^- < CH_3COO^- < Cl^- < NO_3^- < Br^- < J^-$ , is probably related to the varying facility for hydration. When  $F^-$ ,  $PO_4^{3-}$ , or particularly  $H_2PO_4^-$ ,  $HPO_4^{2-}$  and  $C_2O_4^{2-}$  are added to the solution, the nature of absorption of B changes, resulting from the chemical interaction between the boric acid and these anions. An increase in the concentration of the chlorides of Na, K and Li has practically no influence on the absorption of B from boric acid solutions. An increase in the concentration of  $CaCl_2$  and  $MgCl_2$ , however, facilitates transition of B to

1/2

USSR

Zhaymina, R. Ye., Filippova, Z. O., Mun, A. I., Tr. In-ta Khim. Nauk. An KazSSR, 1972, No 36, pp 76-81.

the solid phase, which is explained by the influence of the  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$  ions on the state of the boric acid in the solution. 7 figures, 2 tables, 13 biblio. refs.

2/2

- 87 -



USSR

UDC 576.858.25.095.38:576.895.421

KONDRASHOVA, Z. N., and FILIPPOVETS, R. V., Sverdlovsk Scientific Research  
Institute of Virus Infections

"Infection Rate of Ixodes persulcatus Ticks and Some Aspects of Transovarial  
Transmission After Their Controlled Infection With Tickborne Encephalitis  
Virus"

Moscow, Voprosy Virusologii, No 6, Nov/Dec 70, pp 703-708

Abstract: Results are presented of a study of the infection rate, incidence of transovarial transmission, and changes in the virus in the imago-egg-lava stages of the ticks. The ticks were infected by controlled feeding of certain suitable insects. After strong infection of adult female ticks with Sof'in KE virus strain, the virus was found in 100 percent of the eggs of these ticks. A clear relationship was noted between the infection rate of the eggs laid and the virus dose used for the infection. When this dose was reduced to 1.3-2.3 lg LD<sub>50</sub>/0.03 ml, no virus could be found in the eggs. Infection of batches of eggs was studied in all stages of egg development. It was found that the extent of infection of tick larvae was equivalent to that of eggs in the last days of their development. The results obtained confirm the previous observation that application of a massive dose of the virus to the tick organism

1/2

USSR

KONDRASHOVA, Z. N., and FILIPPOVETS, R. V., Voprosy Virusologii, No 6, Nov/Dec 70, pp 703-708

at the beginning of its development guarantees maximum infection of the tick, at which level the "ovarial barrier" is absolutely overcome by the virus.

2/2

- 45 -

FILIPPOVICH, B.A.

MEDICAL SERVICE

TIMES

3-9-65

501 Military Medical Detachment

105

May 1968 US 616-03-001016-995-12-8

Graduate of Medical Sciences, Lieutenant Colonel of the Medical Service, B.A. Filippovich - Member of the Order of the Patriotic War.

Patient, Z., was admitted to the ophthalmic department of the hospital complaining of lowered vision, nausea, and periodic pain in the stomach. Two months ago, he began to notice a decline in vision of his left eye.

On examination, it was found that visual acuity in the right eye was 0.5, and in the left eye - 0.01. Refraction in both eyes was myopia. The refracting medium was clear - in both eyes. At the bottom of the right eye, the borders of the optic nerve disc were slightly indistinctly white at the bottom of the left eye there were a clearly defined zone of neuritis with edema. The field of vision in the right eye was normal. In the left eye it was restricted by 10° in the lower part. There was a central relative scotoma, revealing 20°. An analysis of the field indicated the presence of a double scotoma.

A 10-day treatment with antihistone (aminocapronic acid, ascorbic acid, vitamin B<sub>1</sub> and B<sub>2</sub>) and intravenous infusion of uretrophin, failed to produce the desired result. Treatment was then begun with pyridoxine. After the second course of treatment, the inflammation at the bottom of the eyes rapidly abated and the visual function began to be restored. After three courses, the field of vision of the left eye returned to normal, the relative scotoma disappeared, and visual acuity improved to 0.2. The visual functions of the right eye became normal.

At the end of 40 days, the patient was discharged from the hospital in good condition. On re-examination a month later, the patient had no complaints. Visual acuity in both eyes was 1.0. The bottom and field of vision in both eyes was within normal limits.

Recorded in January 1969.

**Electrochemistry**

USSR

UDC 541.135.4

FILIPPOVICH, B. S., KAL'VARSKIYA, T. M., State Institute of Applied Chemistry, Leningrad

"Mechanism of Removal of the Reaction Water in a Fuel Element with a Quasi-solid Electrolyte and Waterproofed Electrodes"

Moscow, Elektrokimiya, Vol VII, No 10, pp 1505-1508

Abstract: Water transfer in a waterproof electrode includes passage of the liquid phase and diffusion of vapor through the threshold space not filled with liquid. A study was made of the relative contribution of the different mechanisms of water transfer to the total flow which is essential to the description of the structure of the electrode insuring stationary conditions for any current strength. The following mechanisms are discussed: 1) evaporation under the effect of the temperature gradient, molecular diffusion connected with convexity of the meniscus at the interface between the waterproof electrode and the electrolyte; 3) the mechanism of forcing the liquid phase through the electrode. Only the transfer phenomena determined by the properties of the electrode itself were investigated. Graphs are presented

1/2

USSR

FILIPPOVICH, B. S., et al, Elektrokimiya, Vol VII, No 10, pp 1505-1508

showing the distribution of thermal evaporation to the total water flow as a function of the current density at various temperatures.

2/2

- 6 -

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--STRUCTURAL ORGANIZATION OF THE PROTEIN SYNTHESIZING SYSTEM OF  
CHLOROPLASTS -U-  
AUTHOR-(04)-FILIPPOVICH, I.I., TONGUR, A.M., ALINA, B.A., OPARIN, A.I.  
COUNTRY OF INFO--USSR  
SOURCE--BIOKHIMIYA 1970, 35(2), 247-56  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--CHLOROPLAST, PROTEIN SYNTHESIS, DNA  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FAME--3009/0196 STEP NO--UR/0218/70/035/002/0247/0256  
CIRC ACCESSION NO--AP0139059

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139059

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROTEIN SYNTHESIZING CAPACITY AND THE ELECTRON MICROSCOPIC APPEARANCE OF DIFFERENT RIBOSOME FRACTIONS WERE STUDIED. RIBOSOMES FROM CHLOROPLASTS OF PEA SEEDLINGS WERE DISASSOCIATED STEPWISE FROM LAMELLAR STRUCTURES, PROTEINS, AND LIPOPROTEINS BY CONTROLLED TREATMENT WITH NA DEOXYCHOLATE AND FROM CONNECTED NUCLEIC ACIDS BY TREATMENT WITH DNASE, TRITON X-100, AND NA DODECYL SULFATE. THE DIFFERENT RIBOSOME PREPNS. THUS OBTAINED WERE SEPD. INTO COMPONENTS BY CENTRIFUGATION IN A SUCROSE GRADIENT, AS EVIDENCED BY ELECTRON MICROSCOPY, THE EFFECT OF DETERGENTS WAS TO SOLUBILIZE FIRST THE THYLAKOID BINDING LIPOPROTEINS, AND THEN THE LIPOPROTEINS LOCATED INSIDE THE INDIVIDUAL THYLAKOIDS. FURTHER REMOVAL OF LIPOPROTEINS AND PROTEINS FROM THESE STRUCTURES LED TO THE LIBERATION OF CYCLIC POLYRIBOSOMES, WHICH WERE STILL CONNECTED TO DNA MOLES. IT IS SUGGESTED THAT EACH SEGMENT OF DNA IS COUPLED WITH CYCLIC POLYRIBOSOMES AND EMBEDDED IN A THYLAKOID.

FACILITY: A. N. BAKH INST. BIOCHEM., MOSCOW, USSR.

UNCLASSIFIED

Radiobiology

USSR

UDC 615.849.1.015.25.032.381.033

KOSHCHHEYENKO, N. N., ~~FILIPPOVICH, I. V.~~, and ROMANTSOV, YE. F.,  
Institute of Biophysics, Ministry of Health USSR, Moscow

"Chemical State and Content of the Radioprotector in Some Rat Tissues  
in Early Periods After Intraperitoneal Administration of Cystamine"

Moscow, Voprosy Meditsinskoy Khimii, Vol 16, No 1, Jan/Feb 70, pp  
69-72

Abstract: Spectrophotometric determinations of tissue homogenates indicated that cystamine, after intraperitoneal administration to rats in a dose of 75 mg/kg, accumulated in the thymus, spleen, and liver in the form of beta-mercaptoethylamine, while unchanged cystamine and mixed disulfides of the radioprotector with proteins were absent. The maximum content of beta-mercaptoethylamine in tissues was observed 15-30 min after administration of cystamine, i.e., during the period of the maximum radioprotective effect. E. H. Betz et al (Int. J. Radiat. Biol. 4, 231, 1962) used a polarographic method of determination, and found a maximum content of radioprotector in tissues 2 min. after administration of cystamine, but their results were presumably due to the fact that the organs removed from the abdominal cavity were not washed before homogenization.

1/1



Acc. Nr:

AP0037241

Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16,  
Nr 1, pp 69-72

ON THE CHEMICAL STATE AND CONTENT OF RADIOPROTECTOR IN SOME  
TISSUES OF RAT AT EARLY TIME-INTERVALS AFTER CYSTAMINE  
ADMINISTRATION

Koshcheyenko, N. N.; Filippovich, I. V.; Romantsev, Ye. F.

Institute of Biophysics USSR Ministry of Health, Moscow

The relative content of MEA, cystamine and mixed disulphides of protector with cellular proteins in rat thymus, spleen and liver during 3 hr after i. p. cystamine administration at a radioprotective dose has been studied. It was established that at all time-intervals studied only mercapto-form of the protector has been found in tissues. Cystamine and mixed disulphides content was less than 0.01  $\mu$ mole per 25--100 mg of tissue. The coincidence of maximal radioprotective effect and MEA accumulation in the tissues studied after cystamine administration was noted. One and the same biochemical mechanism (or mechanisms) of radioprotective action for MEA and cystamine may be postulated on the base of similarity between time-course of MEA accumulation in various tissues after MEA and cystamine administration. The difference between these results and those from paper of Betz (Betz E. H., Mewissen D. J., Lelievre P., Intern. J. Rad. Biol., 1962, 4, 231) probably may be explained by the fact that in the paper of Betz the tissues were not washed before homogenization.

REEL/FRAME  
19730168

2 27.

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--ON THE EFFECTIVENESS OF TRIMECAINUM BLOCKADES IN THE DIAGNOSIS OF  
SACROLUMBAR RADICULITIS -U-  
AUTHOR--FILIPPOVICH, N.F.  
COUNTRY OF INFO--USSR  
SOURCE--ZDRAVOCOKHRANENIYE BELORUSSII, 1970, NR 4, PP 74-79  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--NERVOUS SYSTEM DISEASE, ETIOLOGY, NERVOUS SYSTEM DRUG,  
DIAGNOSTIC MEDICINE  
  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3001/0924 STEP NO--UR/0477/70/000/004/0074/0079  
CIRC ACCESSION NO--AP0126583  
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0126583

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WE HAVE STUDIED THE EFFECTIVENESS OF TRIMECAINUM EPIDURAL BLOCKADES USE ON 204 PATIENTS WITH DISCOGENOUS LUMBOSACRAL RADICULITIS. 102 PATIENTS HAVE BEEN TREATED BY TRIMECAINUM EPIDURAL BLOCKADES AND 102 ONES, BY OTHER MEDICAMENTOUS AND PHYSIOTHERAPEUTIC METHODS. IN BOTH GROUPS PATIENTS HAVE BEEN CHOSEN APPROXIMATELY OF THE SAME AGE, SEX, WITH THE SAME ETIOLOGY, CLINICAL PICTURE OF THE DISEASE AND DURATION OF THE PROCESS DEVELOPMENT. A USE OF THE EPIDURAL BLOCKADES BY TRIMECAINUM HAS LED TO A NICE CURATIVE RESULT IN 91.3PERCENT OF THE PATIENTS AND DECREASED THE NUMBER OF BED DAYS FROM 26.4 TO 9.9. FACILITY: POROZOVSKAYA GORPOSELKOVAYA BOL'NITSA AND BELCRUSSKIY N-I INST. NEVROLOGII, NEYROKHIRURGII I FIZIOTERAPII.

UNCLASSIFIED

USSR

MASLOVA, L. M. and FILIPPOVICH, S. M., Chair of Infectious Diseases, Alma-Ata Medical Institute and Laboratory for the Study of Foot and Mouth Disease, Kazakh Veterinary Institute

"Vaccinal Foot-and-Mouth Disease in Man"

Alma-Ata, Zdravookhraneniye Kazakhstana, No 1, 1972, pp 69-70

Abstract: Three days after a healthy 32-year-old veterinarian had vaccinated cows with formaldehyde-killed vaccine from lapinized foot-and-mouth disease virus type O<sub>1</sub> (avirulent for animals), he developed blisters with serous contents (aphthae) in the right axillary region. A week later papular rashes appeared on both hands, face, and neck. The results of the complement-fixation test with material obtained from dead mice infected with lymph from the patient's aphthae confirmed that the virus was identical in antigenic properties to the O<sub>1</sub> virus from which the vaccine had been prepared. After 25 days of symptomatic treatment, the patient was discharged in satisfactory condition, but for a month afterwards he felt weak and dizzy, with occasional spells of dyspnea and tachycardia. Small papules erupted on his hands and neck for 7 months after excessive fatigue, chilling, or drinking alcohol. Specific complement-fixing antibodies appeared in his blood for 13 months.

1/1